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25. (amended) A communications cable comprising:  
a cable jacket;  
a spacer extending within said cable jacket, the spacer being formed of a polymeric material and having a longitudinally extending center portion and plurality of longitudinally extending wall portions radiating from said center portion, the longitudinally extending wall portions including a first section having a first thickness, a second section having a second thickness and a third section having a third thickness, the third thickness being different from the first and second thickness, the third section located between the first section and the second section, the spacer and the cable jacket defining a plurality of compartments within the cable jacket; and  
a twisted pair of insulated conductors disposed in at least one of the compartments.

### I. Status of the Claims

At the time of the Action, Claims 5-13, 16, 17, 25, 26, 40 and 41 were pending. Claims 5-10, 13, 25 and 26 stand rejected under one of Sections 102(b) and (e). Claims 9 and 10 stand rejected under Section 103(a). Claims 40 and 41 are indicated to be allowable. Claims 16 and 17 are indicated to recite allowable subject matter, but are objected to for depending from a rejected claim. These issues are addressed hereinbelow.

### II. The Anticipation Rejections

#### A. Rejections under U.S. Patent No. 5,969,295 to Boucino et al.

Claims 5-8 stand rejected as under Section 102(e) as anticipated by U.S. Patent No. 5,969,295 to Boucino et al. (Boucino). The Action states that Boucino discloses:

a communications cable comprising a cable jacket, a spacer (Fig. 3) extending within the cable jacket, the spacer having a longitudinally extending center portion and plurality of longitudinally extending wall portions radiating from the center portion, the wall portions increasing in thickness over only a portion (near the jacket) thereof from the center portion to the jacket, the spacer and the jacket defining a plurality of compartments within the cable jacket, and a twisted pair of insulated conductors disposed in one of the compartments.  
Boucino et al. also discloses a plurality of twisted pairs being disposed in respective ones of the compartments (Fig. 6), each of the twisted pairs having a different lay length (Fig. 7), the compartments having a helical configuration and the twisted pairs extend [sic] helically about the longitudinal axis of the cable.

*See Action at 3-4.*

Applicant submits that Boucino fails to disclose all of the elements recited in Claim 5. In particular, Boucino fails to recite a spacer having longitudinal wall portions that "increase over only a portion thereof from the center portion to the cable jacket." The cable disclosed in Figure 3 of Boucino has a longitudinally-extending wall portion 66 that clearly increases constantly from center to cable jacket, with no portions thereof that do not increase in thickness from the center portion to the cable jacket. Because Boucino lacks at least this element of Claims 5-8, Applicant submits that the rejection under Section 102(e) is improper, and respectfully requests that it be withdrawn.

**B. Rejections Under U.S. Patent No. 5,789,711 to Gaeris et al.**

The Action rejects Claims 9 and 10 under Section 102(b) as anticipated by U.S. Patent No. 5,789,711 to Gaeris et al. (Gaeris). The Actions states that Gaeris discloses:

a communications cable comprising a cable jacket, a spacer (Figs. 1&2) extending within the cable jacket, the spacer having a longitudinally extending center portion and [a] plurality of longitudinally extending wall portions radiating from the center portion, the wall portions decreasing in thickness over only a portion (near the jacket) thereof from the center portion to the jacket, the spacer and the jacket defining a plurality of compartments within the cable jacket, and a twisted pair of insulated conductors disposed in one of the compartments (claim 9). Gaeris et al. also discloses a plurality of twisted pairs disposed in respective ones of the compartments (claim 10).

*See Action at 4.*

Applicant respectfully submits that Gaeris fails to disclose all of the elements recited in Claim 9. In particular, Gaeris fails to recite a spacer having longitudinal wall portions that "decrease over only a portion thereof from the center portion to the cable jacket." The cable disclosed in Figures 1 and 2 of Gaeris has splines that that clearly decrease constantly from center portion to cable jacket, with no portions thereof that do not increase in thickness from the center portion to the cable jacket (in fact, Gaeris describes the splines as having "a triangular cross-section", which indicates constant decrease in thickness from center portion to jacket). Because Gaeris lacks at least this element of Claims 9 and 10, Applicant submits that this rejection is improper, and respectfully requests that it be withdrawn.

**C. Rejections Under Japanese Patent Application No. JP 02312309 to Ikeda et al.**

The Action rejects Claims 13, 25 and 26 under Section 102(b) as being anticipated by Japanese Patent Application No. JP 02312309 to Ikeda et al. (Ikeda). The Action states that Ikeda discloses:

a communications cable comprising a cable jacket (see the abstract), a spacer (Fig. 1) extending within the cable jacket, the spacer having a longitudinally extending center portion and [a] plurality of longitudinally extending wall portions radiating from the center portion, the wall portions having a first radial section (a first thickness near the jacket) that increases in thickness with distance from the center portion, a second radial section (the middle section or third thickness) that decreases in thickness with distance from the center portion, the spacer and the jacket defining a plurality of compartments within the cable jacket, and a twisted pair of insulated conductors disposed in one of the compartments (claim 13): Ikeda et al. also discloses a second thickness (near the center portion) wherein the third thickness is located between the first and second thicknesses (near the center portion) and is different from the first and second thicknesses (claim 25). Ikeda et al. also discloses the first, second and third thicknesses are different from one another.

*See Action at 5.*

Applicant respectfully submits that Ikeda fails to disclose all of the elements recited in amended Claims 13, 25 and 26. In particular, Ikeda fails to disclose that the spacer is formed of a polymeric material. In contrast, the spacer 1 of Ikeda is described as being covered with "a conductive material 4" (see the Abstract of Ikeda), which would, of course, provide the spacer with quite different electrical and dielectric properties than that recited in the claims at issue. Inasmuch as at least this element of Claims 13 and 25 is absent from Ikeda, Applicant submits that the rejection under Section 102(b) does not stand, and requests that it be withdrawn.

**D. Rejections under Gaeris in View of Boucino**

The Action rejects Claims 11 and 12 under Section 103(a) as obvious based on Gaeris in view of Boucino. The Action states that "Gaeris discloses the invention as claimed including the compartments having a helical configuration and the twisted pairs extending helically about the longitudinal axis of the cable (Claim 12)". The Action concedes that

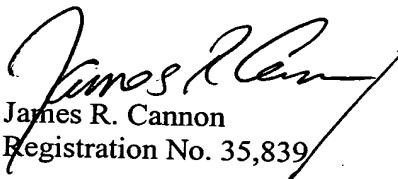
Gaeris fails to disclose each of the twisted pairs having a different lay length. Boucino is cited as disclosing "a communications cable comprising a plurality of different pairs, each having a different lay length." Based on these findings, the Action rejects Claims 11 and 12 as obvious under Section 103(a); the Action states that the ordinarily skilled artisan would provide the twisted pairs of Gaeris with a different lay length "to improve the cross-talk among the pairs as taught by Boucino et al."

In response, Applicant notes that, as discussed before, Gaeris fails to disclose the recited configuration of the spacer wall portions (this element is recited explicitly in Claim 9, from which Claims 11 and 12 depend). Boucino also fails to disclose this configuration. Inasmuch as neither cited reference discloses or suggests this recited element, Applicant respectfully submits that it would not have been obvious to the skilled artisan to conceive the subject matter of Claims 11 and 12, and respectfully requests that this rejection be withdrawn.

### **III. Conclusion**

Inasmuch as the outstanding issues raised in the Action have been addressed, Applicant respectfully requests that the present application be passed to allowance and issue.

Respectfully submitted,



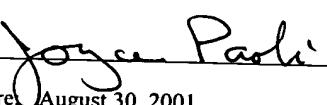
James R. Cannon  
Registration No. 35,839

Myers Bigel Sibley & Sajovec, P.A.  
Post Office Box 37428  
Raleigh, NC 27627  
Telephone (919) 854-1400  
Facsimile (919) 854-1401

### **CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Box Non-Fee Amendment, Commissioner for Patents, Washington, DC 20231, on August 30, 2001.

Joyce Paoli  
Date of Signature August 30, 2001



**Version Marked to Indicate Changes**

13. (amended) A communications cable comprising:
  - a cable jacket;
  - a spacer extending within said cable jacket, the spacer being formed of a polymeric material and having a longitudinally extending center portion and plurality of longitudinally extending wall portions radiating from said center portion, the longitudinally extending wall portions having a first radial section that increases in thickness with distance from the center portion and a second radial section that decreases in thickness with distance from the center portion, the spacer and the cable jacket defining a plurality of compartments within the cable jacket; and
  - a twisted pair of insulated conductors disposed in at least one of the compartments.
  
25. (amended) A communications cable comprising:
  - a cable jacket;
  - a spacer extending within said cable jacket, the spacer being formed of a polymeric material and having a longitudinally extending center portion and plurality of longitudinally extending wall portions radiating from said center portion, the longitudinally extending wall portions including a first section having a first thickness, a second section having a second thickness and a third section having a third thickness, the third thickness being different from the first and second thickness, the third section located between the first section and the second section, the spacer and the cable jacket defining a plurality of compartments within the cable jacket; and
  - a twisted pair of insulated conductors disposed in at least one of the compartments.